

REMARKS

The following remarks are submitted to be fully responsive to the Final Official Action dated September 30, 2004. It is further submitted that this response is timely filed within the three-month shortened statutory period. Accordingly, no fee is deemed necessary for the filing of this response. Should additional fees be required, the Commissioner is authorized to charge Kagan Binder Deposit Account No. 50-1775 and thereafter notify us of the same. Reconsideration of all outstanding grounds of the rejection and allowance of the subject application are believed in order and respectfully requested.

Claim 14 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner submits that “the static attitude,” as recited in line 5 of claim 14, lacks antecedent basis. In response, claim 14 is presently amended to recite “the static angle” as such term has antecedent basis in independent claim 13. As such, withdrawal of the rejection of record of claim 14 is respectfully requested.

In this final Official Action, the Examiner has maintained the rejection of the first Official action in rejecting independent claim 1 under 35 U.S.C. 102 (e) as being anticipated by the Iwamoto reference. The Examiner has also extended this rejection to new claim 12 as being anticipated by the Iwamoto reference. The rejection of claims 1 and 12 is traversed because the Iwamoto reference does not teach the sequence of steps of assembling a head gimbal assembly as recited in claims 1 and 12. Moreover, as discussed in greater detail below, the Iwamoto reference does not teach attaching a slider to an insulation layer of a flex circuit as recited in claim 12.

The Examiner has taken the position that because no sequence of assembly is taught in the Iwamoto reference, any sequence of assembly can be used. Therefore, according to the Examiner, the Iwamoto reference anticipates claims 1 and 12 by teaching attaching a slider to a flex circuit and electrically connecting the slider to the flex circuit before attaching the flex circuit to a suspension. The Examiner’s basis for this position is the exploded view of Figure 1 and the assembly view of Figure 2.

One test for patentability of a process claim is whether or not the steps and the specific order in which they are carried out, as recited in the claims, are normal and obvious procedures for making the article. *Ex Parte Kaul*, 125 USPQ 70. The present invention is

directed to a method of assembling a head gimbal assembly as a sequence of steps performed in a specific inventive order, as set out in claims 1 and 12. First, a slider is attached to a flex circuit to form a flex circuit assembly. Next, the slider is electrically connected to an electrical lead of the flex circuit. Finally, the flex circuit assembly is attached to a suspension. As set out in detail in the specification of the present application, there are multiple advantages to this sequence of assembling the head gimbal assembly. Many of these advantages are achieved because attachment of the slider to the flex circuit *and* attachment of the slider to the electrical lead of the flex circuit are accomplished *prior to* the attachment of these components to a suspension.

The order of assembly recited in claims 1 and 12 is not a normal and obvious procedure for making a head gimbal suspension and the Examiner has not provided any evidence in support thereof. Absent applicant's disclosure, there is simply no teaching of such an order of assembly in the Iwamoto reference. In fact, as recognized by the Examiner, there is no order of assembly taught for assembling the slider, flex circuit, and suspension. This is because the focus of the Iwamoto reference is not the order of assembly of these components but the structure of the electrical connection between the slider and the signal circuitry. See column 3, lines 52-53.

Moreover, as submitted in applicant's response to the first Official Action, the Examiner's interpretation of the Iwamoto reference is not consistent with the disclosure and teachings within this reference. One of ordinary skill in the art would clearly understand that the Figures of the Iwamoto reference are provided for illustration purposes as expressly stated in the specification so as to preclude other interpretations of what is shown. The purpose of the Figures of the Iwamoto reference is to illustrate the structure of the electrical connection and nothing more, especially any order of assembly of the slider, flex circuit, and suspension. Importantly, Figure 1 is characterized in the "Brief Description of the Drawings" section as being a view "with the flexible conductive laminate conductor shown separated for clarity of illustration" (emphasis added). The term "separated" explicitly means that the drawing shows the assembly after it has been fully assembled (which assembly manner is not taught, other than as conventionally done at that time) followed by a separation for illustrative purposes. How can the drawing suggest an assembly process where it is clearly noted as being an illustration showing components after assembly for explanation of component features? Such

use of separated views is well known and common for exactly such explanation purposes. To say that the separated view of Figure 1 teaches any specific assembly sequence is completely contrary to express language of the drawing description and to the well established understanding of illustration techniques and nomenclature. And, to say any assembled drawing teaches all possible assembly sequences is clearly contrary to U.S. patent law. Without any further recitation of assembly methods or procedures or other prior art references showing known methods, it is submitted that the disclosure of Iwamoto is entirely deficient of any suggestion to first attach a slider to a flex circuit, then electrically connect the slider to an electrical lead of the flex circuit, and then attach the flex circuit assembly to a suspension in that order. Accordingly, it is submitted that presently pending claims 1 and 12 and the dependent claims thereof are patentable over the Iwamoto reference.

Additionally, in rejecting claim 12, the Examiner has simply modified the original rejection of claim 1 to assert that the Iwamoto reference teaches attaching a slider to an insulation layer of a flex circuit. Applicants traverse the rejection in that there is no basis in the Iwamoto reference for any such assertion.

Independent claim 12 further recites that the slider is attached to an insulating layer of the flexible circuit in an otherwise similar sequential assembly as in claim 1. Such limitation further distinguishes from the Iwamoto reference in that Iwamoto clearly states that the slider 32 is mounted to the central tongue 38 of the flexure 14. Moreover, Figure 1 shows a flexible conductive laminate 42 having edge 56. The slider 32 is clearly not attached to the conductive laminate 42 as it is spaced from the edge 56. Thus, even in the situation where a flexure (or other element of metal or the like) can be a part of a gimbal assembly as set out in claim 12, the slider of Iwamoto is attached to the metal tongue and not to an insulating layer of a flexible circuit and thus does not anticipate or suggest such. Thus, in addition to the above distinction regarding the claimed sequential assembly, Iwamoto is also deficient as compared to claim 12 in that the recited attachment of a slider to an insulation layer of a flex circuit is missing.

The other cited references including the Pan et al. reference and the Schudel reference do not overcome the basic deficiencies of the Iwamoto reference. None of the art of record suggests the attachment of a head slider to a flexible circuit physically and electrically prior to the attachment of the slider/flexible circuit combination to the suspension.

Claims 13 and 14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamoto in view of Schudel. The rejection is traversed for at least the reason that a combination including Schudel does not cure the deficiency of Iwamoto.

In the Official Action, the Examiner correctly submits that Iwamoto does not teach a process of determining the static angle of a suspension prior to the process of attaching a head/slider circuited gimbal assembly to the suspension. The Examiner thus proposes that it would be obvious to modify Iwamoto as based on Schudel as the Schudel reference teaches measuring the static angle of a load beam without a flexure attached thereto. Even if one could modify Iwamoto in view of Schudel, any such combination does not arrive at the present invention as claimed in claim 13. Specifically, claim 13 recites "determining the static angle of the head/slider circuited gimbal assembly prior to the step of attaching the head/slider circuited gimbal assembly to the suspension." The only thing that Schudel teaches is measuring the static angle of a suspension before a flexure is attached to the suspension. Moreover, Schudel fails to disclose measuring the static angle of any type of flexure, particularly a circuited flexure, before attaching the flexure to the suspension. Accordingly, it is submitted that presently pending claims 13 and 14 are patentable over Iwamoto in view of Schudel.

In view of the above remarks, it is respectfully submitted that the claims and the present application are now in condition for allowance, which allowance is earnestly solicited. In the event that a phone conference between the Examiner and the Applicant's undersigned attorney would help resolve any remaining issues in the application, the Examiner is invited to contact the undersigned as set out below.

Dated: December 30, 2004

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